



MACKELLAR SCHWERDT ARCHITECTS

**MERIDIAN COMMUNITY PRIMARY SCHOOL
PEACEHAVEN, EAST SUSSEX**

**ARBORICULTURAL IMPACT ASSESSMENT
TREE PROTECTION – METHOD STATEMENT**

Approved By: Joe Jackson
Signed:
Position: Principal
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**MERIDIAN COMMUNITY PRIMARY SCHOOL, PEACEHAVEN, EAST SUSSEX
PROPOSED DEVELOPMENT - ARBORICULTURAL METHOD STATEMENT**

1.0 INTRODUCTION

- 1.1 Mackellar Schwerdt Architects have commissioned Lizard Landscape Design and Ecology to undertake a detailed tree survey of the land and buildings found at Meridian Community Primary School, Roderick Avenue, Peacehaven (*Grid Reference: TQ 414 024– hereafter referred to as 'the site'*) in order to determine likely impacts upon existing trees within the site and develop a mitigation strategy for the protection of existing trees to be retained for the proposed development at the site.

Development Proposals

- 1.2 The development proposals consist of the construction of an extension to the east of the existing school building, new car parking to the north-west and additional play areas to the south of the existing school building. The southern section of the site is to remain unaltered within current development proposals.

Site Information

- 1.3 The site is located in Peacehaven, to the east of Brighton in East Sussex. The site covers approximately 2.1 hectares and is approximately 62.00 metres above sea-level. No existing public rights of way exist across the site and permission has been sought to access the site.
- 1.4 The site is formed of an operational school premises and has been managed for this purpose with most of the land being buildings, hardstanding (*sports court / playground*) and amenity grassland (*sports pitches and playing fields*). The buildings and hardstanding surfaces are concentrated in the western and northern sectors of the site with sports pitches dominating the southern sector. The site is enclosed by secure fencing with scattered trees to all boundaries. The area internally is particularly open with scattered trees around existing buildings.
- 1.5 The existing trees within the proposed development site boundaries have been surveyed in accordance with *BS 5837; 2012 – 'Trees in Relation to Design, Demolition and Construction – Recommendations'*; and are recorded within the accompanying report; *LLD954 – Existing Tree Schedule*; and are identified within the following drawing; *LLD954 – Tree Constraints Plan*.
- 1.5 The development proposals seek to maintain and protect the significant existing mature trees across the development site in accordance with the requirements and specification of *BS 5837; 2012 'Trees in Relation to Design, Demolition and Construction - recommendations'*. The proposals shall impact upon a number of existing trees and are identified within the following drawing; *LLD954 – Tree Retention and Protection Plan*. The Tree Retention and Protection Plan illustrates the impact of the proposed development upon the existing trees and sets out where vegetation is to be removed and specifically measures for tree and root protection wherever existing trees and vegetation are to be retained and protected.
- 1.6 Following the proposed removal of existing vegetation from the site, there are a number of existing trees within the vicinity of the development proposals that would be potentially impacted upon by the development proposals. The existing trees to be retained are to be protected in accordance with the guidance contained within *BS 5837; 2012 – 'Trees in Relation to Design, Demolition and Construction'*.
- 1.7 The status, impact, and protection of the existing trees and vegetation are subject to the protective measures as detailed in the following Arboricultural Method Statement.

Drawings and Reports

- 1.8 The Tree Retention and Protection Proposals comprise the following;
- LLD954 / 01-01 – Tree Constraints Plan (1 of 3);*
 - LLD954 / 01-02 – Tree Constraints Plan (2 of 3);*
 - LLD954 / 01-03 – Tree Constraints Plan (3 of 3);*
 - LLD954 / 02-01 – Tree Retention and Protection Plan (1 of 3);*
 - LLD954 / 02-02 – Tree Retention and Protection Plan (2 of 3);*
 - LLD954 / 02-03 – Tree Retention and Protection Plan (3 of 3);*
- LLD954 - Existing Tree Schedule (– proposed schedule of works);*
LLD954 - Arboricultural Impact Assessment and Method Statement.

2.0 EXISTING SITE VEGETATION

- 2.1 The site is utilised as a primary school and as such is dominated by areas of building and hardstanding / bare ground. School buildings are concentrated to the north of the school site with car parking to the north-west while the southern section is formed largely of playing fields. The site comprises a mix of habitats comprising introduced shrub; and scattered trees and hedging to the site boundaries further outlined within the Extended Ecology Phase 1 Habitat Survey report (*Lizard Landscape Design; dated 10.02.16*).
- 2.2 The dominant character of the site is essentially of built form, hard standing and open playing fields devoid of mature vegetation with vegetation located primarily to the site boundaries.
- 2.3 The school is accessed to the western edge of the site via a driveway link to Roderick Avenue. The driveway is bordered to the southern edge by a small line of trees (Ash and Field Maple) which are becoming mature, located within a grassed verge. The tree planting extends across and within the entrance car park with scattered tree specimens (predominantly Whitebeam) situated within pockets of soft landscaped shrub planting areas. The car park is contained to the northern edge by a substantial massing of ornamental shrub planting and which forms the southern edge of the habitat area / wildlife garden.
- 2.4 The habitat area is located to the north western edge of the site and comprises the greatest concentration of mature vegetation and trees, especially held to the western and north western site boundaries. The vegetation comprises mixed species trees of variable maturity and condition but which offers amenity value to the residential boundary of the school and includes a grouping of understory scrub vegetation adjacent to school entrance below wildlife garden. The vegetation comprises stands of Elder, Hawthorn, Willow, Alder and Hazel and which extends north to the western site boundary as a loose scrub hedgeline. The vegetation is generally of variable form and condition but includes a small number of more mature and prominent individual specimens within; Alder, Willow and Holm Oak. The Willow specimens are heavily inclined above the existing garden path to eastern aspect and above the existing adjacent parking areas.
- 2.5 The boundary scrub and treeline vegetation continues eastward for a short section along the northern boundary of the habitat area to the north of the car park. The northern site boundary is then largely devoid of vegetation other than a small number of scattered trees of variable condition moving to the eastern boundary edge. A singular twin stemmed Pine tree is a more substantial specimen located immediately east of the existing temporary classroom.
- 2.6 The eastern boundary is notably devoid of mature trees or structural vegetation. A mature and substantial Beech tree is located to the southern edge of the eastern boundary, flanked by two Whitebeam trees and a stand of young Poplar trees within rough grassland.

- 2.7 The southern site edge similarly contains only scattered trees, however, a number of these are mature specimens and offer some amenity to the residential boundary.
- 2.8 The western playing field boundary is better vegetated in terms of continuous shrub with occasional young trees within but is devoid of significant specimens. The majority of the eastern and southern site area is given over to playing field and hard play areas; a singular isolated specimen (Field Maple) is located between the two areas and has not formed significant canopy cover.
- 2.9 The following Arboricultural Impact Assessment and Method Statement outlines and details measures to provide for the retention and protection of trees and ecological features found within the woodland and the site as a whole with regard to the proposed residential development.

3.0 ARBORICULTURAL IMPACT ASSESSMENT

- 3.1 The development proposals consist of the construction of an extension to the east of the existing school building, new car parking to the north-west and addition play areas to the south of the existing school building. The proposals affect a number of the existing trees and site vegetation within the development site boundaries, a number of which shall require removal; trees and vegetation to be retained shall require detailed protection to enable their retention within the proposed scheme. All existing trees to be retained shall be protected in accordance with the guidance of *BS 5837; 2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*.

Tree Removal

- 3.2 The following trees and vegetation shall require removal in order to accommodate the development proposals. The proposals have been developed specifically to enable the retention of the majority of the trees within the site and especially those being significant and mature specimens. A number of trees are proposed to be removed to accommodate the development proposals or due to poor condition; and are identified within *LLD954 – Existing Tree Schedule* and the accompanying *Tree Retention and Protection Plans*.

Tree Removal – recommendation due to condition

- *T 05 – Sorbus aria (Whitebeam); Category U;*
- *TG 05 – Sorbus aria (2 no. Whitebeam); Category U;*
- *T27 – Fraxinus excelsior (Ash) ; Category U;*

Tree Removal – to accommodate the development proposals

- *TG 13 (iii) – Boundary Scrub Vegetation; 2 no. Salix sp. (Willow); Category C; - remove*
- *H 14 – Escallonia sp. (Ornamental Shrub Hedgeline); Category C; - partially retain / partially remove;*
- *T 15 – Fraxinus excelsior (Ash); Category C; - remove;*
- *T 16 – Sorbus aria (Whitebeam); Category C; - remove.*

Tree Surgery Works – recommendation due to condition

- *T 09 – Populus x canescens (Grey Poplar); Category U; - Evident lateral cracking within 1.0m of trunk to lower branch carried to north western aspect above car park. - Branch should be removed to reduce hazard.*

Tree Retention and Protection

- 3.3 Following the removal of the above vegetation, those trees to be retained are to be protected in accordance with *BS 5837; 2012 – Trees in Relation to Design, Demolition and Construction – Recommendations*; the protection proposals are recorded within the accompanying report; *LLD954 – Existing Tree Schedule*; and are identified within the following drawings *LLD954 / (02-01; 02-02; 02-03) – Tree Retention and Protection Plan*. The trees proposed for retention are identified below and a detailed description of impact mitigation outlined.
- 3.4 All trees to be retained on site shall be protected with fencing erected in accordance with *BS5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*; as specified within drawing *LLD954 / (02-01; 02-02; 02-03) – Tree Retention and Protection Plans*.
- 3.5 The car park proposals shall potentially impact a number of retained existing trees located to the western edge of the wildlife garden. The trees shall be protected through the construction process through the use of Tree Protective Fencing in accordance with *BS 5837;2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The excavation required for the construction of the car park shall require incursion of the Root Protection Areas (*RPA*) of a single semi-mature Holm Oak (*TG13 (ii)*). Whilst the default recommendation is to avoid altogether the intrusion of existing ground within *RPA*s it is felt that the relatively early / mid life class of the tree and the retention of existing available surrounding open ground shall allow the useful future viability of the tree. The excavation of existing ground within the *RPA* shall be undertaken with a *Manual Excavation Method*, whereby no roots above 25mm shall be severed prior to seeking arboricultural advice.
- 3.6 The installation of a new informal play area is proposed following the removal of the temporary classroom to the northern boundary. The proposed play area is predominantly situated over the classroom footprint, however, a section extends to the east upon the open ground and *RPA* of tree T25 Pinus sp. (Pine). The impingement of this *RPA* amounts to under 15%. Any proposed surfacing shall therefore require a *'No Dig Construction Method'* to be implemented, in accordance with *BS5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. Excavation shall be limited to the manual removal of existing construction material / herb layer only and no change to the existing ground level is permitted. All construction / surfacing shall be made above existing ground levels.
- 3.7 Tree removal and tree surgery works shall be undertaken in accordance with *BS 3998: 2010 'Tree Work: Recommendations'*. The construction access road has been designated to avoid impacts upon significant trees with the site. Construction in proximity to these trees, as identified within drawing *LLD954 / (02-01; 02-02; 02-03) – Tree Retention and Protection Plans*, should proceed with due care and attention to avoid damage to the adjacent protected vegetation.
- 3.8 All Tree Protection and Tree Protective Fencing to be in accordance with *BS 5837;2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. Any facilitation pruning to allow for the construction activities shall be undertaken only upon seeking advice of qualified arborist; and carried out in accordance with *BS 3998: 2010 'Tree Work: Recommendations'*. All plant and vehicles engaged with demolition and construction are to operate outside *RPA*s of existing trees to be retained. The protective fencing is to remain in place for the duration and completion of the construction period following demolition.
- 3.9 The above impacts have been assessed and mitigation methods outlined. The mitigation is further detailed in the Arboricultural Method Statement below. Replacement tree planting should be considered within the scheme where existing trees required for removal to accommodate the development proposals.

4.0 STAGES OF WORK / PROGRAMME

- 4.1 The Tannery residential development proposals shall involve the following site operations that could impact upon the existing tree cover;
- *Removal of existing vegetation not for retention;*
 - *Contractor movements; site access and operations; storage and compound;*
 - *Construction of campus building; car park construction; and ground work operations;*
 - *Implementation of services and utilities.*
- 4.2 The supervision of work stages and periodic attendance of an Arboricultural Consultancy should be undertaken as part of any approved development scheme by the Local Planning Authority.
- 4.3 Site attendance should be arranged with all parties and undertaken with the agreement of the LPA within any given permission for the scheme.
- 4.4 If deemed necessary, the suggested key stages of work outlined for site attendance are as follows;
- *Pre-commencement meeting;*
 - *Installation of Tree Protection measures;*
 - *Method Statement briefing for site staff;*
 - *Removal of Tree Protection measures.*

5.0 ARBORICULTURAL METHOD STATEMENT

Contractor Movements; Site Access and Operations; Storage and Compound Areas

- 5.1 The contractor site compound shall be located outside of the defined tree root protection areas as indicated on drawings; *LLD954 – Tree Retention and Protection Plan (02-01; 02-02; 02-03).*
- 5.2 The contractor site compound shall be located so as to not incur damage or injury to the tree root systems or canopy of any existing trees or vegetation within or adjacent to the site, in accordance with *BS 5837; 2012 – Trees in Relation to Design, Demolition and Construction - recommendations*. All operations associated with the usage of the compound area shall be undertaken with due care and attention so as to negate damage of the surrounding environment.
- 5.3 Construction access to the site area shall be made at all times via the proposed access road from Glynn Road / Roderick Avenue. Pre-construction vehicular movement to facilitate the removal of existing vegetation and undertake tree surgery works shall be limited to the minimum requirement in order to fulfil the vegetation removal works and no vehicular access shall be permitted over unmade ground within the tree root protection area of existing trees to be retained and protected without prior ground protection measures put in place. Once the tree removal and tree surgery works have been completed the tree protective fencing works shall be put in place. Vehicular movements during the construction period shall be limited to the areas of existing hard standing or newly protected ground only.
- 5.4 Construction activities including demolition and removal of existing buildings / construction shall be undertaken once the tree protective fencing measures have been put in place in order to protect existing tree canopies and tree root protection areas from vehicle movements and material storage.

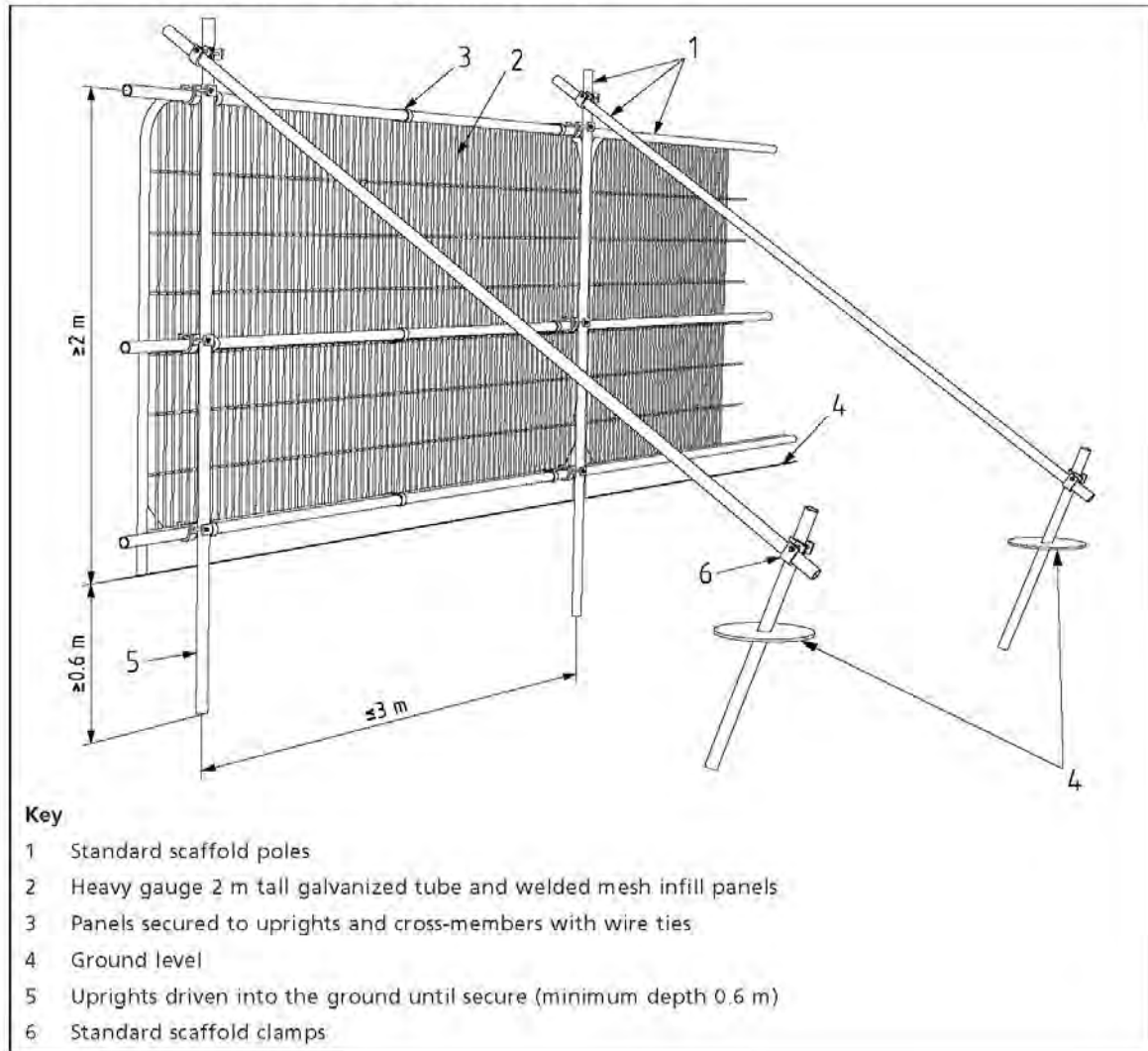
- 5.5 All site operations and construction procedures for the duration of the construction period shall seek to protect the existing site vegetation and tree root protection areas in accordance with *BS 5837; 2012 – Trees in Relation to Design, Demolition and Construction – recommendations*.

Removal of Existing Vegetation

- 5.6 All existing trees designated for removal are to be removed in accordance with the Tree Protection and Retention Drawing *LLD954 – Tree Retention and Protection Plan (02-01; 02-02; 02-03)*. All tree work and removal shall be carried out in accordance with *BS 5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'* and *BS3998: 2010 – 'Tree Work: Recommendations'*. Trees designated for removal and felling shall be clearly marked on site with white paint. Prior to the removal and felling of trees, the required work and tree positions shall be agreed on site with the Landscape Architect / Arboricultural Consultant. Trees shall be felled, and tree surgery works undertaken prior to the erection of the Tree Protective Fencing. Care should be taken during the tree removal process to avoid any damage to any trees which are designated to be retained and protected.
- 5.7 Stumps shall be removed and cut away so that the top of the tree stump shall be at least 450 mm below the final topsoil level in order that the site can be reinstated in accordance with the existing site levels. Stumps are to be treated with an approved herbicide to be agreed with the Landscape Architect / Arboricultural Consultant. Where the depth is greater than 450 mm the areas shall be backfilled with topsoil to the required level.
- 5.8 The removal of shrub or scrub material within the tree root protection area of any tree to be retained shall employ a manual removal method; the use of hand tools shall be used in order to maintain the ground surface of the tree root protection area, and reduce any damage to existing tree roots within the protected tree root zone. Adjacent trees shall not be utilised as anchors or levers to facilitate the removal of adjacent vegetation.
- Tree Surgery**
- 5.9 Tree surgery measures and works have been identified with the attached *Existing Tree Schedule and Schedule of Tree Works*. Any significant defects found in the trees during the course of the scheduled work shall be reported to the Landscape Architect / Arboricultural Consultant. All scheduled and arising tree work shall be undertaken by an approved and qualified Tree Surgeon in accordance with *BS3998: 2010 - Tree Work: Recommendations*. Care should be taken to avoid damage to neighbouring trees to be retained. Branches in confined spaces shall be removed and taken down in sections. All arisings shall be transported and disposed of away from site to the contractor's tip.
- Tree and Vegetation Management**
- 5.10 For tree and vegetation retention and removal proposals refer to the attached *Existing Tree Schedule*. For tree and vegetation management proposals refer to the tree surgery works and management prescriptions contained within the *Existing Tree Schedule and Schedule of Tree Works*.
- Protection and Retention of Existing Vegetation**
- 5.11 The contractor shall exercise extreme care when performing operations beneath the canopy of existing mature trees and vegetation and within the specified tree root protection areas designated for protection and avoid at all times damage to the roots, trunk and branches of existing trees proposed to be retained.

- 5.12 All excavations, cultivation, and grading beneath the canopy of existing mature trees and within the specified tree root protection areas of the existing trees and vegetation shall be carried out using hand tools, taking care not to damage or disturb any existing tree roots.
- 5.13 All trees to be retained on site shall be protected with fencing erected around the area of mature vegetation in accordance with *BS5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'*. The fencing shall be installed, protected, and maintained during the main works by the contractor who shall be responsible for protecting any area beneath the canopy of the existing trees and within the specified tree root protection areas.
- 5.14 The installed protective fencing shall be positioned to the outside edge of the existing tree Root Protection Areas or as specified in accordance with the Tree Protection and Retention Drawing *LLD954 – Tree Retention and Protection Plan (02-01; 02-02; 02-03)*. All tree protection is to be in accordance with *BS 5837; 2012; 'Trees in Relation to Design, Demolition and Construction - recommendations'*. The fencing should be strained, and fixed to fences, walls, knee rails where possible to provide a complete protected area. The tree protective fencing is to be;
- min. 2.0 metres height 'Heras' Welded Wire Mesh Fencing.
- 5.15 Day-glo ribbons shall be maintained during the main works by the contractor attached to the top of the fencing to ensure that the fencing is clearly visible during the works. The tree protection fencing shall display all-weather notices stating '*Construction Exclusion Zone – NO ACCESS*'.
- 5.16 All such fencing shall be maintained for the full contract period. All necessary excavations, earthworks, and cultivation beneath the canopy spread of any existing tree; shrub or hedge shall be undertaken by hand. No commencement of construction operations may occur prior to the inspection of the installed tree and ground protection by the Landscape Architect / Arboricultural Consultant. Repositioning of the protective fencing during the course of the contract as the contract works progress shall need prior agreement with the Landscape Architect / Arboricultural Consultant.
- 5.17 Within the protected area the following activities must not take place;
- *No vehicles are to be used in the fenced off areas;*
 - *No materials are to be stockpiled or stored;*
 - *No chemicals are to be stored;*
 - *No excavation or increase in the soil level shall occur;*
 - *No fires shall be lit on site.*
- 5.18 At the end of the contract period the contractor shall remove the tree protective fencing from the site. All retained vegetation shall be healthy and thriving at the handover date.
- 5.19 ***Heras – Anti-climb Smart Weld Panel Fencing***
Supplier: *Safe Site Facilities*; or equal and approved
Address: *Old Selden Farm, Selden Lane, Patching, West Sussex, BN13 3UL*
Tel: *0845 463 5421*; Email: *info@safesitefacilities.co.uk*
Web: *www.safesitefacilities.co.uk*
Specifications; Galvanised anti-climb mesh; 2.0m height x 3.5m width; 13.8kg weight.

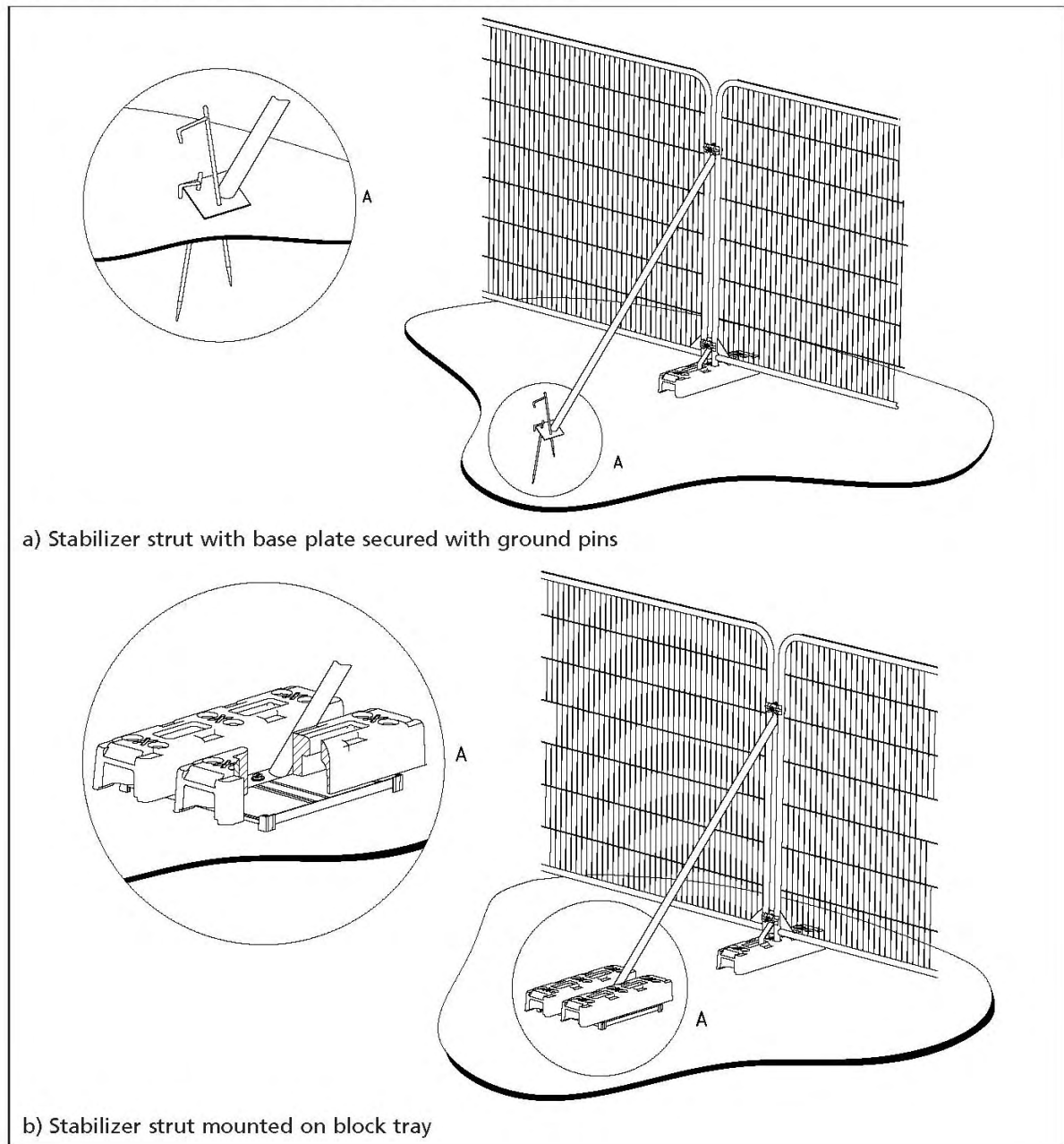
Figure 2 Default specification for protective barrier



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(Care should be taken to avoid damage to unseen tree roots and underground services; a secondary fencing support system may be implemented to accommodate these as outlined in Figure No. 3 below).

Figure 3 Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray

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Ground Protection; Tree Protection Zone - Operation Zones during Construction

- 5.20 Where construction operations require activity within the exposed unmade ground of any existing tree root protection area, a temporary protection zone shall be implemented allowing for construction operations only, but no vehicular access close to existing trees during the construction period. The temporary ground protection for construction operations only, including pedestrian operated plant to a gross weight of 2.0 tonnes (no general vehicular access is to be permitted), shall comprise a single thickness of ground protection plates secured and supported upon a scaffold framework driven into the ground or by a retained non-compressible layer (*woodchip / Type 1*) of 150mm depth (100mm depth for pedestrian only access) placed above a geo-textile separation membrane in order to protect existing tree roots.
- 5.21 For temporary vehicular construction movements exceeding 2.0 tonnes within woodland areas and exposed unmade ground above Root Protection Areas of trees to be retained, a ground stabilising mesh (*'TDP SN20 GeoGrid' or equal and approved*), shall be rolled out over the existing ground level and evenly covered with a No Fines - Open Graded Aggregate (*in accordance with Highways Agency Specification; Clause 805 (Type 3) or equal and approved.*) incorporated within a 3 dimensional GeoCell (*Terram Geocell or equal and approved*) and shall ensure a minimum supportive depth of 150mm.

Ground Protection; Tree Protection Zone – 'No-Dig' Construction

- 5.22 In accordance with BS 5837; 2012; *'Trees in Relation to Design, Demolition and Construction - Recommendations'* ground levels should not be raised or lowered within the existing tree root protection areas. A *'no-dig' Construction* method shall be employed in order to avoid damage to existing tree roots and localised compaction of subsoil within the tree root protection area.
- 5.23 Where new surfacing is proposed within the tree root protection areas of the existing trees it shall be installed using a *'no-dig' permeable geo-grid construction*. Existing paving material shall be left undisturbed and retained during the construction period for as long as possible in order to protect the tree root protection area of the existing trees to be retained; existing surface hard landscape materials and sub-base layers only shall be removed carefully by hand within the existing tree root protection areas and shall not exceed the depth of the existing construction. Existing subsoil / topsoil layers shall be retained and protected in place in order to protect tree roots.
- 5.24 A ground stabilising geo-mesh shall be installed above the existing ground levels of the proposed car park area; prior to installation, all hollows within the existing construction are to be filled and no high points of existing undisturbed / unmade ground shall be skimmed. A ground stabilising mesh (*'TDP SN20 GeoGrid' or equal and approved*), shall be rolled out over the existing ground level and evenly covered with a No Fines - Open Graded Aggregate (*in accordance with Highways Agency Specification; Clause 805 (Type 3) or equal and approved.*)
- 5.25 The granular fill shall be incorporated within a 3 dimensional GeoCell (*Terram Geocell or equal and approved*) and shall ensure a minimum supportive construction depth of 100mm as specified. A geo-textile filter membrane is to be laid over the granular fill construction (*Geotextile filter membrane to be TDP 115 Non-woven Geotextile Fabric or equal and approved.*) A permeable paving system and construction method shall be installed over the prepared sub-base layers.

Ground Protection; Tree Protection Zone – Manual Excavation

- 5.26 Where the development proposals necessitate excavation of building foundations; the tie-ing in and re-grading of existing and proposed levels for vehicular access; or include the implementation of underground services such services, cables, pipe work; a manual excavation method must be implemented using hand held tools to minimise the impact on existing trees and roots. The excavation shall be executed with due care and attention not to disturb exposed unmade ground and any existing tree roots present within it.
- 5.27 Roots over 25mm diameter or those occurring in clumps must not be severed without arboricultural advice. Roots below such size may be cut cleanly using specialised hand tools only and to the minimum extent to allow provision. All exposed roots should be immediately wrapped in dry Hessian to avoid drying. On completion of the excavation and at the earliest opportunity the wrapping should be removed, and the roots surrounded and protected with a loose granular fill (*clean washed sharp sand or topsoil free of contaminants or matter injurious to rooting systems*) prior to backfilling the excavation to the desired levels.
- 5.28 Existing service runs should always be used wherever possible. Where the proposed routing of services impinges upon the root protection area of any existing tree to be retained, the routing shall be undertaken in accordance with a manual excavation method; to be carefully hand dug and routed most directly to and from the exterior of the tree root protection area radius. Services are to be trenched and routed together wherever possible to create the minimum impact upon the tree roots of the existing trees to be retained. Trench excavation across the tree root protection area radius beside an existing tree shall be avoided, whereby tree roots will become severed. Where services are to cross the edge of an existing tree root protection area, they should be routed through existing tree roots, via a hand dug ducting sleeve, avoiding damage to existing tree roots within the root protection zone.
- Tree Protection Zone – Protection through Demolition / removal**
- 5.29 For any proposed demolition / removal of structures within the vicinity of trees to be retained, pruning should be first undertaken to facilitate access and prevent injurious contact due to plant movements. When demolishing / removing a structure (including underground structures) within root protection areas, ground protection measures shall be implemented to protect the underlying soil to the edge of the existing structure. All plant and vehicles involved with demolition / removal works should either operate outside the RPA, or upon the installed ground protection. All ground protection should be installed prior to commencement of operations.
- 5.30 Where trees are located adjacent to structures proposed for removed from site, removal / demolition should be undertaken inwards and from within the footprint of the existing building ('top down, pull back' method). Where an existing hard surface is scheduled for removal, care should be taken not to disturb tree roots that might be present beneath it. Hand-held tools or appropriate machinery should be used (under arboricultural supervision) to remove the existing surface, working backwards over the area, so that the machine is not moving over the exposed ground.

Arboricultural Method Statement – Notes; General

- 5.31 The principles and recommendations of *BS5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'* shall be adhered to where possible in order to prevent damage or undue stress upon the existing trees, soils and roots potentially impacted upon by the development proposals.
- 5.32 Destruction of soil structures through soil compaction, excavation or contamination shall be avoided at all times within the tree root protection areas. Physical damage to existing trees to be retained; roots, stems, branches shall be prevented wherever possible.
- 5.33 All tree protection measures are to be carried out, on site and within the development proposals, in accordance with the relevant approved drawings accompanying this method statement.
- 5.34 Arboricultural Supervision shall be required at the following stages of work;
- *Installation of tree protection measures;*
 - *Method statement briefing for site staff;*
 - *Supervision of the manual excavation of building foundations within tree root protection areas;*
 - *Supervision of the 'no-dig' area prior to and for the implementation of the construction process;*
 - *Removal of tree protection measures.*
- 5.35 The loss through development of existing trees may occasionally be unavoidable. Wherever existing trees are removed to accommodate development, contingency should be made for relocation of removed trees if possible or the replanting of young trees with suitable species for the site location where relocation of existing trees is not viable.
- 5.36 The phasing of works might be appropriate in order to implement the proposed development. Where the construction operations impact upon existing trees to be retained the trees shall be fully protected where possible in accordance with *BS 5837; 2012; 'Trees in Relation to Design, Demolition and Construction - Recommendations'* for the duration of the construction period. The phased retraction of construction operations may allow for tree protection measures to be withdrawn / re-sited. The re-alignment or withdrawal of any Tree Protection Measure shall only be permitted with the agreement of the Project Arboricultural Consultant / Local Planning Authority.

6.0 Contact Details

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